

2nd Grade: HOMES AND HABITATS

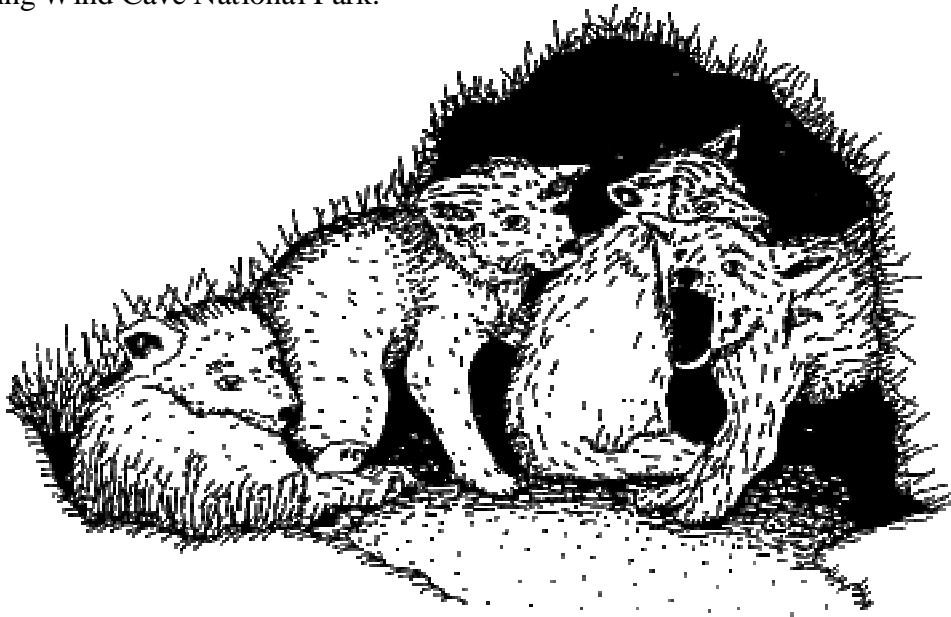
Goals: This unit will help students to identify a variety of "homes" in the natural world. It will also introduce students to the different components of a habitat. Discussion will cover the effects of changes to the habitat and how we can improve and protect that habitat.

Objectives: By completing this unit, the students will be able to:

1. define home and habitat
2. identify elements that make up a habitat
3. list elements of their own habitat – food, water, air, shelter, and space in a suitable arrangement – and generalize that animals and plants have similar basic needs
4. give examples of animals who live in different habitats, such as prairie, forest, cave, or city and why they do
5. discuss how changes in a habitat affect the animals and the plants
6. make suggestions on how humans can have a positive effect on a habitat
7. discuss connections between animals, plants, and habitats.

These objectives will be achieved in three stages:

- Nametags, pre-visit activities and information – teacher(s) will complete **Nametag Activity** and select at least one **Pre-visit Activity** to do in the classroom before visiting Wind Cave National Park. Selection of activities will be communicated to the ranger leading park program.
- Park activities – ranger directed with assistance and supervision of the teacher and/or teacher aide.
- Post-visit activities – teacher(s) will select at least one **Post-visit Activity** to do in the classroom after visiting Wind Cave National Park.



Pre Visit Preparations:

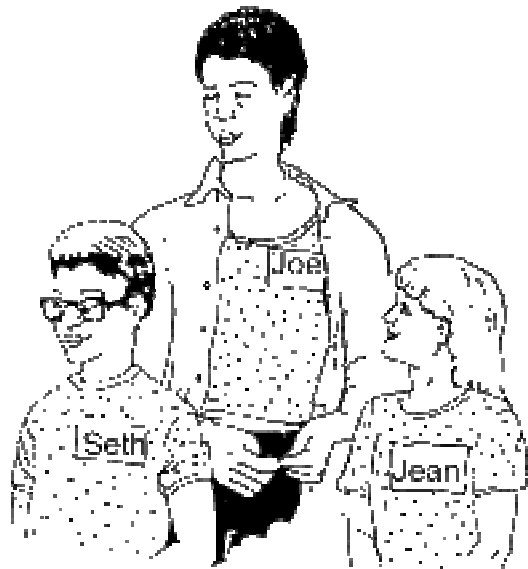
Nametag - Who Am I?

Objective: Students will extend the concept of community (ecosystem) to the natural world. They will learn about members of the Wind Cave National Park community.

Procedure: Students will make a nametag. They should select a Wind Cave National Park community member from the list below to illustrate their nametag. In addition to making the nametag, the students should learn something about the community member they have selected.

Suggested Name Tag List:

Bison	Mule Deer
Prairie Dog	Coyote
Bull Snake	Pasqueflower
Elk	Cottontail Rabbit
Moth	Butterfly
Eagle	Meadow lark
Cave	Woodpecker
Lichen	Buffalo Grass
Prairie Rattlesnake	Grasshoppers
Little Blue Stem Grass	Ponderosa Pine
Great Horned Owl	Bluebird
Bat	Juniper Tree
Black-footed Ferret	Chokecherry



Students should arrive knowing that there are three main communities at Wind Cave National Park: the prairie, the forest, and the cave. Have the students imagine that they are their community member and ask them why they are found at Wind Cave National Park. Ask the children where that animal or plant lives and what their home would be like. What kind of food does the animal or plant need to live? Who are their neighbors?

Pre-Visit Activity:

The Comforts of Home

Objective: By examining their own homes, students will identify the minimum requirements for life. They will use this information to compare their needs with the needs of plants and animals, explaining what animals and plants need to survive.

Background: Humans and other animals have some of the same basic needs. Every animal needs a home. Most of us live in a home of some kind. But a home is more than just a house. The scientific term for an animal's home is "habitat". It is more like a neighborhood that has everything in it that is needed for survival.

Procedure: Have the students think about the most important things they need in their home. Make a list of these items and talk about what they need to survive. Differentiate between needs and wants, challenging children to think about what is essential – **food, water, and shelter**. Write these words on the chalkboard. Air, space, and sunshine are important and will be discussed at the park. Food and water will be easy concepts for the students. Shelter may be more difficult. Ask the students to explain what shelter is.

Have the students draw a picture of their own home including pictures of where they find food, water, and shelter. Ask the students to label the parts of their drawings. Food and water will not be difficult to identify. Shelter could be shown by labeling the roof or ceiling of a house.

Once the drawings are completed, write two words on the chalkboard: **arrangement and habitat**. Say the words aloud asking the children to repeat them. Tell the students that when food, water, and shelter go together in a special way so that animals – including people – can live, we call that place a **habitat**. The food, water, shelter, and space are in an **arrangement** that makes it possible for the animals to live. Ask the students to write the word **habitat** in big letters at the top of their drawings.

In anticipation of the trip to Wind Cave National Park, ask the students what kinds of homes they might discover at the park - include the prairie, forest and cave habitats. Have the students draw a picture of the animal or plant they selected in the **Nametag Activity** that could be found in the park. Ask them to make sure they include food, water, and shelter in an arrangement they think would make it possible for the animal to survive. When they have completed the picture, ask them to talk about their drawings, pointing out the habitat components they have included. As you drive to the park, have the students look for animals and for the animal's homes.



Song/Story:

Zole

Objective: Using this song students will compare the homes of two different animals and their own home.

Procedure: Read the following story to the students and have them join the story when you sing: "Zole, zole, zole rock (den) is my home, rock (den) is my home."
(Zole is pronounced zoe/ lee – first syllable – long o / second syllable – long e).

Talk with the students about why bear could not remember the song and why every animal and person will have a different song.

Zole

There was a lizard who lived on a rock. He was very happy living on his rock. All day long he would sing "Zole, zole, zole, rock is my home, rock is my home." One day a bear saw him sitting on the rock and heard him singing. He wondered why the lizard was so happy. So the bear asked the lizard why he was so happy. The lizard said that he was so happy because he was at home and the rock was a great place to live.

So the bear left and went back to his home and thought "I wish I knew that song so I would be happy." So he went back to lizard to learn the song. Lizard said he would be very happy to teach him his song. He sang "Zole, zole, zole, rock is my home, rock is my home." That made bear feel good again so he went home. But on the way, he forgot the song.

He went back to lizard and asked him if he would teach him the song again. Lizard said he would be very happy to teach the song again. He sang "Zole, zole, zole, rock is my home, rock is my home." Again bear went home and again he forgot the song.

So he went back to lizard one more time. This time lizard was asleep on his warm rock in the sunshine. What could bear do? He decided to pick lizard up and put him in a bag. Then he could take lizard to his home where he could teach bear his song.

On the way lizard woke up and was very scared. He didn't know what to do so he decided to sing his song so he wouldn't be so frightened. He sang "Zole, zole, zole, rock is my home, rock is my home."

When bear opened the bag, lizard saw that bear didn't live on a rock. He understood right away why bear couldn't learn the song. He told bear that he couldn't learn the song because he didn't live on a rock. But he would make bear a song that he could learn. He sang "Zole, zole, zole, den is my home, den is my home." Bear learned that song very easily and he was very happy.

But we don't live on a rock or in a den so we have to have a different song too. What will your song be? At Wind Cave National Park our song is "Zole, zole, zole, Wind Cave is my home, Wind Cave is my home."



Draw Me a Prairie: part 1

Objective: Students will define a habitat. They will recognize that a habitat can be large or small. Students will identify what living things need to survive.

Background: A habitat is the place where a plant or animal gets all the things it needs to survive, such as food, water, shelter, and space for having and raising offspring. A habitat may be 100 square miles of area for a mountain lion or a single plant for an insect. The prairie and the forest are habitats, but so is a tree.

When people think of the prairie they think of an endless sea of swaying grasses that are hip deep and generally golden. While this may at first seem true it really overlooks the fact that there are bushes, flowers, cacti, trees, and many animals and other things that also can be found in the prairie. Animals and plants that live on the prairie have their homes there. They must find everything they need to survive there.

A tree may serve as part of an organism's habitat, or it may be the organism's entire habitat. For example, a tree may provide food for squirrels and a nest site for robins. But lichens and moss get everything they need from growing right on the tree. The tree itself needs a habitat to survive.

Procedure: Have the students stand while you read the poems. While you are reading have them act out what they are hearing and feeling. After reading the prairie poem, show students pictures of the prairie. Discuss how the poem prepared them for seeing the pictures. Have the students draw a picture of their idea of the prairie, including some plants and animals that live there. Discuss the drawings. Ask why the drawings look the way they do. Ask what the animals will find in this habitat to survive. Will there be food? Will they be able to raise their young there? Is there shelter for them? Will there be enough space for them? The poem is slightly adapted from David Bouchard's book *If you're not from the prairie...*

Have the students think of other poems about habitats that they know. Would a poem about a tree be about a habitat? Read the poem about the tree. Where does the tree live? Does the tree have a habitat? What lives in a tree? Is the tree a habitat? What is a forest? Have the students draw a picture of a tree and where it lives or what might use it as a habitat.

Prairie Poem:

If you're not from the prairie,
You've not heard the grass.
In strong summer winds, the grains and grass bend
And sway to a dance that seems never to end.

If you're not from the prairie,
You don't know the sun,
Diamonds that bounce off crisp winter snow,
Warm waters in lakes and ponds that we know.



If you're not from the prairie,
You don't know the wind,
Our cold winds of winter cut right to the core,
Hot summer wind devils can blow down the door.

If you're not from the prairie,
You don't know the sky.
The bold prairie sky is clear, bright, and blue
Through sometimes cloud messages give us a clue.

If you're not from the prairie,
You don't know the flat.
When travelers pass through across our great plains,
They all view our home, "It's simple and flat!" They all say the same.

If you're not from the prairie,
You don't know our trees.
The trees that have taken so long, we watched as they grew
They're loved and they're treasured – the prairie has few.

Tree poem: I dreamed
I was a tree
On a hillside
Playing with the wind.
A snow covered tree
Sparkling in the soft
moonlight
With the wind rushing by.
Graceful, growing
Climbing among the clouds
Calmly awaiting the
sunrise.



Post-Visit Activity:

Map Your Home Range

Objective: Children will identify what a home range is — an important concept in wildlife biology — while practicing mapping skills.

Background: All animals have a “home range”—the area they travel over regularly to find food, water, shelter, and raise a family. Predators (carnivores) typically have a much larger home range than their prey species. That is because a herbivore’s (plant eater) food is much more abundant than that of a predator. People have home ranges too — the areas we go to visit friends, buy food, go to school, play games, sports, and other activities.

Materials: You will need to make or get a simplified map of your local area.

Procedure: Using a local map, have students label places that are important to them — friends’ homes, grocery stores, school, library, sports facilities, etc. Then, they should draw a prominent line around their home ranges. They can try to calculate how much area their home range is, and compare it to the list of predator home ranges. This idea of space may be hard for the students to visualize. Try to compare these numbers to something students can understand. The Black Hills is about 100 miles north to south and 50 miles east to west equalizing about 5000 square miles.

Average Habitat Requirements for Predators	
Grizzly Bear	As much as 800 square miles
Gray Wolf	10 square miles for one wolf
Gray Wolves	460 square for average pack
Mountain Lion	From 30 to 300 square miles
Coyote	From 5 to 26 square miles depending on habitat
Red Fox	25 acres

Extension: Have your students make a picture of the home range for the animal or plant they selected from the **Nametag Activity**. Suggest that they consider how humans might change the picture or how we could help improve the habitat. The most serious problem driving species to extinction is the loss of habitat. Every day, more and more natural areas are lost to roads, houses, shopping malls, and other human development. There are many organizations that are aware of the problem and are helping animals. Bat Conservation International, Nature Conservancy, Audubon Society, Human Society of the US Wildlife Land Trust, US Park Service, Forest Service, and the Fish and Wildlife Service. The students might want to investigate some of these organizations and see if there are ways the class can help with wildlife projects – maybe by planting trees or butterfly gardens or cleaning up litter. The National Wildlife Federation has a program called Backyard Wildlife Habitat in which students can become involved. Check out their website at www.nwf.org/habitats.

Draw Me a Prairie: part 2

Objective: This activity reinforces the activities the students participated in at the park. The students organize their ideas about habitats by creating a poem about a habitat.

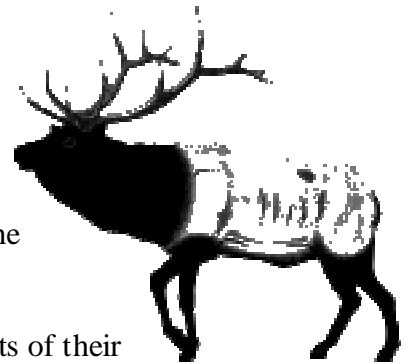
Procedure: Discuss as a class the way the prairie looked. Did they see any other habitats? How did the habitats that they drew compare with what they experienced at the park? What was living on the prairie? How was it different from the forest? Have the class look at the drawings they made before going to the park. Ask them what the differences are, the similarities, what do they think now? Can they define a habitat?

Have the students sit quietly for a few moments thinking about the habitats they discovered at the park. Tell students to write descriptive words about the habitats: how they look, smell, what lives there, etc. Show the students various types of poems. Allow them a few moments to write a poem in any style they choose. If the students would like to share their poem, let them read it to the class. Compile the poems into a book or books that can be shared with parents.

How Many Elk Can Live in This Park?

Objective: This *Project Wild* activity will help students identify the components of an animal's habitat and understand that each component is needed for survival. They will also recognize the consequences of habitat loss and habitat improvement.

Procedure: Students become elk and have to gather important components of their habitat in this physically active game. The components of the habitat are different colored cards on which the first letter of the component is written. The components are food, water, bedding site, hiding place and safe travel corridors - F, W, B, H and T. For a class of 30 students make 30 cards of each of the 5 colors/components. (Included in this packet is a page of letters that can be made into component cards using your school copying machine and magic markers).



Start by telling the students to pick a special spot (maybe their desk). This will be their "home site". Distribute all of the component cards on the ground in the center of the room. On the word "go" the elk may pick up one card at a time and return with it to their "home site". They may then walk back to get another card until all of the components have been picked up.

After all of the cards are picked up, discuss what each card represents. Only the students who have one of each of the five needed components will survive. Once the students know that they have to have one of each card, let them try again to see who will survive. Vary the game by withholding some of the component cards to represent habitat loss, and adding extra cards of a component to represent habitat improvement. How many survive under each situation?

Discussion: Ask the students why some survived and some did not. Would this happen in the wild? What would happen if all animals always survived; none ever died? Would any of the surviving animals have enough to eat? What would happen to the grasses or the prairie?

Vocabulary List:

The following vocabulary words are those most likely to be used when students visit Wind Cave National Park. They are included here for use by teachers and/or students. You may use them for dictionary work before visiting the park. Students should leave Wind Cave National Park with a good understanding of these words and concepts.

adapt - to change or adjust to new surroundings or conditions.

camouflage - the coloring, characteristics, or traits a plant or animal uses to disguise itself or to hide from an enemy.

cave - a hollow space inside the earth large enough for a person to enter.

community - a group of plants and animals in a given area or region that depend on each other.

different - not alike, not the same.

effect - something brought about by a cause; or a result.

environment - surroundings; all of the things which surround and influence the development of an organism.

extinct - a plant or animal that is no longer found, for example: dinosaurs.

forest - a thick growth of trees and underbrush covering a large area.

habitat - the place where a plant or animal lives.

home - a place where a person, plant, or animal lives

limestone - a rock made of the shells or skeletons of sea animals.

prairie - a large treeless area covered with grasses.

predator - an animal that catches and kills another animal for food.

prey - an animal that is caught by a predator.

protect - to keep from injury or danger.

similar - nearly the same; almost alike.

web - a series of connecting strands, for example: a spider web.

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H	H	H	H	H	H
F	F	F	F	F	F
W	W	W	W	W	W
B	B	B	B	B	B